



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,984	10/28/2003	Takeshi Kimura	040302-0353	3973

22428 7590 10/04/2006

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

LIEU, JULIE BICHNGOC

ART UNIT	PAPER NUMBER
----------	--------------

2612

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

54

Office Action Summary	Application No. 10/693,984	Applicant(s) KIMURA ET AL.	
	Examiner Julie Lieu	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-25 is/are allowed.
- 6) ☒ Claim(s) 1-14, 18-20 and 26-34 is/are rejected.
- 7) ☒ Claim(s) 15-17 and 21-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is in response to Applicant's amendment filed July 12, 2006. Claims 26 and 32 have been amended. No claims have been added or canceled.
2. The indicated allowability of claims 1-25 is withdrawn in view of the newly discovered reference(s) to Friedrich et al.. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-are rejected under 35 U.S.C. 102(e) as being anticipated by Friederich et al. (US Patent No. 6,623,747).

Claim 1:

Friederich et al. discloses an information providing apparatus for a vehicle, comprising:

- a. a contact possibility information unit 60 configured to determine a contact possibility of the vehicle contacting with an object that is present in front of the vehicle

according to relative motion between the vehicle and the front object, the contact possibility information unit providing contact possibility information by changing at least one of the driving force and the braking force of the vehicle according to the contact possibility (col. 4, lines 7-31);

b. a driver intention detector 20 configured to detect a driving intention of a driver of the vehicle, the driver intention detector detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing (col. 3, lines 55-63); and

c. a controller 60 configured to modify at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detector ;

d. wherein the controller is configured to modify the at least one threshold to delay the timing of providing the contact possibility information (col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.)

Claim 2:

In Friederich, the driving intention is that the driver intentionally brings the vehicle closer to the front object when the vehicle is driven in a steady state.

Claim 3:

In Friederich, the driver intention detector detects a lane change (col. 4, lines 49-53) of the vehicle as the intention of the driver in intentionally bringing the vehicle closer to the front object.

Claim 4:

Controller 60 delays the timing of providing the contact possibility information in a case where the front object is in a lane to which the vehicle is going to change its lane (col. 4, lines 49-53).

Claim 5:

In Friederich, in a case where the driver intention detector detects that the driver is intentionally bringing the vehicle closer to the front object with the vehicle in a steady driving state, the controller reduces a control value to change the driving force or braking force.

Claim 6:

In Friederich, in a case where the driver intention detector detects that the driver is intentionally bringing the vehicle closer to the front object with the vehicle in a steady driving state, the controller reduces a control value to change the driving force or braking force.

Claim 7:

The relative motion in Friederich includes a relative speed between the vehicle and the front object; and in a case where the driver intention detector detects that the driver is intentionally bringing the vehicle closer to the front object with the vehicle being in a steady driving state, the controller changes a control value of at least one of the driving force and braking force according to the relative speed. Col. 4, lines 47 to col. 5, lines 67.

Claims 8-14:

Controller 60 releases the modification after a predetermined time.

Claim 18:

Friederich discloses an information providing apparatus for a vehicle, comprising:

- a. contact possibility information means 60 for determining a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to relative motion between the vehicle and the front object, the contact possibility information means providing contact possibility information by changing at least one of the driving force and braking force of the vehicle according to the contact possibility (col. 4, lines 7-31);
- b. driver intention detecting means 20 for detecting a driving intention of a driver of the vehicle, the driver intention detecting means detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing; and
- c. controlling means 60 for modifying at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detecting means 20;
- d. wherein the controlling means is configured to modify the at least one threshold to delay the timing of providing the contact possibility information (col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.)

Claim 19:

The rejection of claim 19 recites the rejection of claim 1, except it is a method claim.

Claim 20:

Friederich discloses an information providing apparatus for a vehicle, comprising:

- a. contact possibility information means 60 for determining a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to

relative motion between the vehicle and the front object, the contact possibility information means providing contact possibility information by changing at least one of the driving force and braking force of the vehicle according to the contact possibility (col. 4, lines 7-31);

b. driver intention detecting means 20 for detecting a driving intention of a driver of the vehicle, the driver intention detecting means detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing; and

c. controller 60 for modifying at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detecting means 20;

d. wherein the controller is configured to track a predetermined amount of time when the driver intention detector detects a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing;

e. wherein the controller is configured to determine if the predetermined amount of time has elapsed, wherein if the predetermined amount of time has elapsed the threshold is no longer modified, and wherein if the predetermined amount of time has not elapsed the threshold remains modified.

Col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.

Claim 22:

In the Friederich's system, the driver intention detector 20 detects a lane change of the vehicle as an intention of the driver in intentionally bringing the vehicle closer to the front object; and the controller is further configured to determine if the object is also changing lanes after the controller determines that the predetermined amount of time has not elapsed, wherein if the object is changing lanes the threshold is not modified, and wherein if the object is not changing lanes the threshold is modified.

Claim 26:

Friederich discloses a controller for a host vehicle which has an object detecting unit that detects an object ahead of the host vehicle, the controller comprising:

- a. a processor 60 that is adapted to calculate a counterforce of a virtual member in front of the host vehicle which provides feedback to a driver of the host vehicle based on a relationship between the host vehicle and an object ahead of the host vehicle;
- b. wherein the processor 60 is configured to delay the timing of providing the feedback to the driver when an intention of the driver is detected. Col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.

Claim 27:

In Friederich's system, the processor 60 is configured to delay the timing of providing the feedback to the driver by reducing a length of the virtual member.

Claim 28:

The processor 60 is configured to delay timing of providing feedback to the driver when an intention of the driver is detected that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the object is increasing.

Claim 29:

The processor 60 delays the timing of providing contact possibility information in a case where the object is in a lane to which the vehicle is going to change its lane.

Claim 32:

Friederich discloses a controller for an own vehicle which has an object detecting unit that detects an object ahead of the own vehicle, comprising a processor 60 that is adapted to calculate a counterforce of a virtual member in front of the own vehicle which provides feedback to a driver of the own vehicle based on a relationship between the own vehicle, an object ahead of the own vehicle and an intention of the driver. Col. 4, lines 7-31; col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.

Claim 33:

The processor 60 detects a lane change of the vehicle as the intention of the driver.

Claim 34:

The processor 60 detects a lane change of the vehicle as the intention of the driver.

Allowable Subject Matter

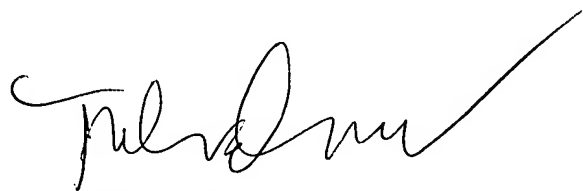
5. Claims 15-17 and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 23-25 are allowed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on MaxiFlex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Julie Lieu', with a long, sweeping horizontal line extending to the right.

Julie Lieu
Primary Examiner
Art Unit 2612

Sept 28, 06